

Re App : Ryan Bechard

Docket: 205066

S.N. : 10/709,693

Group Art Unit: 3749

Filed : 05/24/2004

Examiner: JC Cocks

For : OIL PREHEATER FOR A COMBUSTION SYSTEM

**DECLARATION TO TRAVERSE REJECTION OR OBJECTION**  
**(under 37 CFR 1.132)**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

1. This declaration is submitted in support of the allowance of the foregoing application and traversal to the pending rejection thereof.
2. I, Tim Kuhn, make this declaration as a person of skill in the art pertaining to the foregoing application.
3. I have been requested to make this declaration by the applicant to the foregoing application. I met Bechard 3+ years ago through a client that purchased and recommended Bechard's product. I called Bechard and met him and became familiar with his product and soon became a dealer and a believer in his technology. My opinion is based upon hands on experience with all of these mentioned devices. My opinion is not biased on knowing Ryan Bechard nor have I been paid for my following comments.
4. My understanding and appreciation of the subject matter, industry and invention disclosed in the foregoing application is based on the following and by way of example: I am a 3rd generation heating and plumbing contractor succeeded by my father Dave Kuhn who was succeeded by my grandfather Andy Kuhn. I now have over 23 years



experience having owned Kuhn HVAC for 10 years. I specialize in residential and commercial boiler heating. I operate in a 100 mile radius of Eau Claire in west central Wisconsin.

5. I have reviewed the description, drawings and pending claims of the foregoing application.

6. I have particularly reviewed the rejected claims of patent application serial number 10/709,693.

7. I have also reviewed the arguments, comments and objections of the examiner to the foregoing claims found in Office Action Summary dated 04/27/2007.

8. I have also reviewed the references cited by the examiner to the foregoing claims which are as follows:

Patents:

9. From my review of US patent to Wilson (5,156,139), I understand the reference teaches and discloses an apparatus used inside an oil burner for preheating oil using an electric heater inserted into port labeled 14. I also understand Wilson has some "plugs" that can be placed at different positions to control the oil flow rate.

10. From my review of US patent to Leach (2,976,918), I understand the reference teaches and discloses a piping assembly used to heat cold fuel oil. I have serviced these and understand fully how they work.

11. From my review of US patent to Bender (5,067,894), I understand the reference teaches and discloses another oil preheater assembly similar to Wilson except more advanced in that it is easier to remove from an oil burner. Instead of plugs used to control the oil flow rate, Bender uses a typical pressure regulator. This invention is sold

by Shenandoah Mfg. I fully know and understand this invention as I have performed the overhaul on these to clean out the sludgy oil produced by the electric heater number 120.

12. In contrast to the teachings of the references the pending application discloses a new way of preheating oil in an oil burner using hot water instead of electrical heaters. Bechard discloses "the solution" to an ongoing problem in the waste oil heating industry. I testify as one who has hands on experience with Bechard's product. I installed one of Bechard's systems in 2004 and since then I have not needed to overhaul the burner. My customer is completely satisfied with his system and has told others to whom I have sold to. Having read Bechard's patent application, I testify that his invention does perform what he stated it will do.

13. Although the examiner argues it would have been obvious to one skilled in the art to modify and adapt the water, oil pre-heater 10 disclosed in US patent no. 2,976,918 to Leach into the device of US patent no. 5,156,139 to Wilson, as one skilled in the art I respectfully disagree for the following reasons: As I view both drawings side by side, I do not understand how combining the two would be possible. It would take serious, extreme modifications to both objects to combine them. Even if they were somehow combined, I do not understand how they would get put into a burner! I would not have thought of this because of the space limitations on an oil burner. Leach's heater is made of pipe and fittings. Oil burner's usually have a 3" or 4" air tube that the nozzle assembly goes into. Using a pipe assembly, I don't see any way to stuff this into the limited space of a burner. In my 23+ years of experience having worked with both pieces of equipment, not once have I entertained the thought of combining these to come up with what Bechard has invented.

14. In further support of my considered opinion that it would not have been obvious to me to combine the foregoing references as argued by the examiner, I am aware of the following that would not have led me to the conclusions asserted by the examiner.

I get paid to service burners such as Bender and Wilson's. My clients greatly dislike this because it diminishes their savings from burning waste oil. I know several other of my competitor's heating techs like me that do the same. This is an income stream for me and my competitor's dealers that kept me from wanting to come up with a better solution. Why would I, prior to Bechard's burner, want to eliminate something that brings me income? It's this industry's standard "brain washing". However I would rather help a client save money, have a satisfied client and not have to clean out a grimy disgusting burner.

My clients that have Bechard's burner not requiring overhauling are substantially happier than those who use burners with electric heaters. Bechard's is substantially more reliable, cost less to operate and, bar none, much safer. Because of this, my clients are also much happier with me than those clients who have the electric burner. Therefore, I push Bechard's system over his competitors. Which would you rather have?

I have seen many "close calls" of building fires caused by electrically preheated burners, most of them because junk got into the nozzle and caused the burner to burn very poorly.

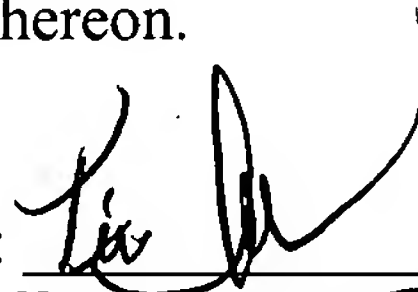
This junk was created by electric heaters overheating oil. This junk can't be found in Bechard's burner because hot water can't create it!!!

In my 23+ years of experience I have never seen nor would I have thought of Bechard's technology. In my professional opinion Bechard's burner is definitely worthy of a patent.

15. From the foregoing, it is therefore my opinion that it would not have been obvious to combine the references as argued by the examiner to derive the claimed invention claimed by applicant.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Declarant:



Typed name

Tim Kuhn

Address:

2307 Orchard place

Eau Claire, WI 54603

Date October 23, 2007

or

COUNTY OF

Eau Claire

STATE OF

Wisconsin

On this 23<sup>rd</sup> day of October, 2007 before me, a Notary Public for and within the County aforesaid, personally appeared Timothy Kuhn Name, whom I know to be the person who signed the foregoing affidavit.



Notary Public

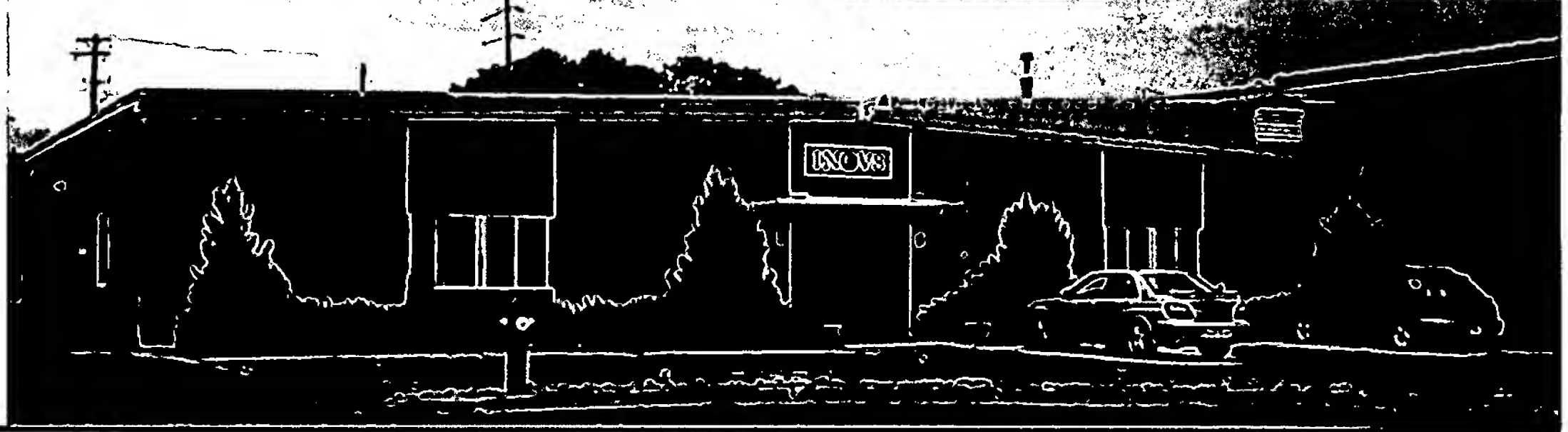
Exp. 9-12-2010

Enclosur





# INOV8 INTERNATIONAL, INC. "Leaders in Alternative Energy Solutions"



## *Burner Refurbishing in 2006*

It is that time again when the furnace or boiler requires some minor tasks to assure good operation this fall.

Please check your owner's manual for detailed instructions on:

- How to clean the combustion chamber & heat exchanger
- Check for and remove ash from the chimney
- Remove water from the oil tank, and
- Check the nozzle for debris.

If it's been three or more years since the burner has been here, you should consider a complete burner refurbishing.

To prevent delays in getting your burner done, we are requiring that burners be sent in the months of June, July and August for refurbishing. They will be

returned within a month of receipt. During these three months the basic price for refurbishing is discounted to \$375 plus parts and shipping. The basic price is \$475 if your burner arrives in the months of September through March, AND if it is older than 5 years and has never been in for this work. The additional charge is for machining modifications that require additional labor to bring the burner to current standards. As in the past the refurbishing will include a complete disassembly and cleaning of the burner, replacement of small components, rebuild, testing and setting to factory specifications. Cycle testing has been added to try to identify intermittent problems. **However, components are not changed out unless they are found to have failed dur-**



**ing the testing.** If you don't want the risk and hassle of replacing failed components during the heating season ask about our "Module Warranty Extension Program" (see below).

Burners that are older than 10 years or received after August will be done on a time and material basis.

Please include notes regarding the burner performance, or questions you might have and as always be sure to cap oil lines and protect against shipping damage. We will notify you and repair that damage BUT charge for it.

A service report will be returned with the burner. All burners are returned "prepaid or COD". We accept VISA/Master Card. Please contact Anita with arrangements.

### Preparing burner for shipping:

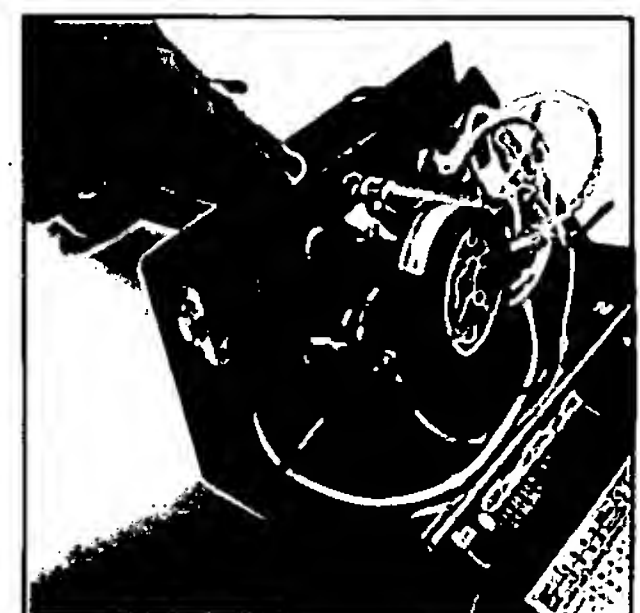
- Plug oil lines
- Extra protection for Fireeye control
- Do not send air regulator
- Do not pack upside down—label box as fragile & right side up
- Pack firmly in bubbles or packing peanuts
- Insure for min of \$500

## *Module Warranty Extension Program*

For \$500 INOV8 will replace key components on the module and provide a one year warranty on the module. If the module fails during the covered period a replacement part will be sent at no cost. UPS ground shipping is included. This applies to modules that are less than 10 years

old. Labor is not included in the warranty. All removed parts will be returned for you to use as back up.

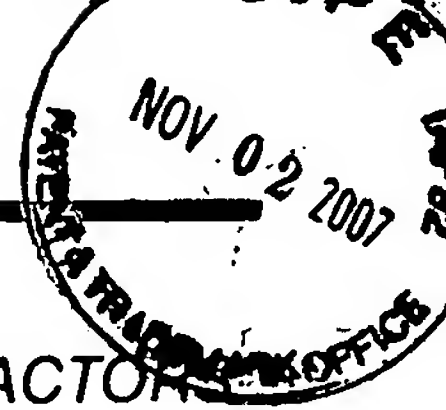
*This shows the inside of the module & some of the small components that will be replaced.*



# Wiersgalla Co.

# W

MECHANICAL CONTRACTORS



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Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

1. This declaration is submitted in support of the allowance of the foregoing application and traversal to the pending rejection thereof.
2. I, Daniel Wiersgalla, make this declaration as a person of skill in the art pertaining to the foregoing application.
3. I have been requested to make this declaration by the applicant to the foregoing application. I have known Ryan Bechard and have been a dealer of his combustion system for nearly four years. I met Bechard through a mutual client who purchased one of Bechard's systems. This client was very pleased with Bechard's system which intrigued me and led me to meeting him. Although I have known Bechard my opinion is not biased by my personal association with applicant Ryan Bechard.
4. My understanding and appreciation of the subject matter, industry and invention disclosed in the foregoing application is based on the following and by way of example:



*Serving Wisconsin Since 1969*



I entered into the heating service business in 1989 working under my father Ed Wiersgalla. Wiersgalla Company, Inc has been in business since 1969 serving west central Wisconsin. I graduated from Chippewa Valley Technical College in 1992. I am currently Vice President of Wiersgalla Company, Inc.

5. I have reviewed the description, drawings and pending claims of the foregoing application.

6. I have particularly reviewed the rejected claims of patent application serial number 10/709,693.

7. I have also reviewed the arguments, comments and objections of the examiner to the foregoing claims found in Office Action Summary dated 04/27/2007.

8. I have also reviewed the references cited by the examiner to the foregoing claims which are as follows:

Patents:

9. From my review of US patent to Wilson (5,156,139), I understand the reference teaches and discloses a device used in an oil burner for preheating oil that uses an electric heater. Port 14 shows a hole that Wilson uses to insert an electric heater.

10. From my review of US patent to Leach (2,976,918), I understand the reference teaches and discloses a piece of equipment used to heat oil for the purpose of "pumping oil to a burner". I have serviced many of these in my 20+ years of experience. The true purpose of this piece of equipment as stated in the specification is to get "fuel oil to a burner" NOT TO BURN IT! In the second paragraph it states "When the oil is cold, it becomes thick that it does not readily flow through the supply lines and in some cases actually blocks the passage of oil therethrough even under very high pressures." This



clearly explains heating oil for proper FLOW TO A BURNER. This device DOES NOT HEAT OIL INSIDE A BURNER AT THE NOZZLE. Because of this a burner will not fire with out preheating inside the burner. This piece of equipment is used in our industry to heat oil kept in outdoor tanks as it enters a building to make it pumpable.

11. From my review of US patent to Bender (5,067,894), I understand the reference teaches and discloses a similar device to Wilson that preheats oil “inside” an oil burner using electric heaters. As clearly shown Bender designed his preheater around being able to quickly get it out of a burner. Why? So that a technician can clean out the gunk created by the electric heaters. I have first hand serviced a few of these and refuse to send our techs out to work these burners. They are an ongoing maintenance, no profit, reputation destroying, piece of equipment.

12. In contrast to the teachings of the references the pending application discloses a device that “within an oil burner” heats oil using a heated liquid, a true solution to the multi oil / waste oil heating industry. A device that DOES NOT NEED TO BE REMOVED TO CLEAN OUT THE OVER HEATED BAKED OIL.

13. Although the examiner argues it would have been obvious to one skilled in the art to modify and adapt the water, oil pre-heater 10 disclosed in US patent no. 2,976,918 to Leach into the device of US patent no. 5,156,139 to Wilson, as one skilled in the art I respectfully disagree for the following reasons: Wilson’s device is large, too large and too complex to put inside a burner. Electric heaters are small and easy to put into a burner as they have been for decades. Heating technicians are not experienced machinists, capable of creating Bechard’s preheater. It takes serious machining skills to design what Bechard has invented, skills we heating technicians are not taught in the field

or HVAC schools. It also takes high tech computer controlled machining equipment to manufacture what Bechard had designed, equipment not used by heating technicians.

14. As one who reads engineered drawings everyday, I respectfully disagree with the examiner's argument that Bechard does not show "continuous unbroken channels". The arrows especially make it crystal clear as to the flow through the channels. If they were not "continuous" the oil, air and water would not flow through the device, NOR WOULD IT WORK. Besides the drawings, Bechard's descriptions of the channels in the specification clearly point out that they are continuous.

15. On my review of the prior amendment, as one skilled in the art of experience using air atomizing nozzles, it is my clear understanding that the darkened portion on the nozzle "27" represents an o-ring seal. Though it was previously not numbered, Bechard's descriptions in his specification make it clear that this is a seal and as to the necessity of this seal.

It is also my understanding as one skilled in the art of experience using air atomizing nozzles that channel 43 is a standard part of air atomizing nozzles found in this industry. These channels direct the flow of compressed air to the cap of the nozzle. Thus the necessity of cavity 42 is also needed for this purpose.

16. In further support of my considered opinion that it would not have been obvious to me to combine the foregoing references as argued by the examiner, I am aware of the following that would not have led me to the conclusion asserted by the examiner.

Last year I was approached by one of Bechard's competitor's to sell their products in our line of products. They stated that there is good money in the annual

overhaul of the burner that our company would charge to our customers. They stated typically \$500 to as high as \$900 depending on how many parts were needed. I included this page of their owner's manual (Cleanburn) that shows the manufacturer's requirements to have this service performed. It's the same "overhaul" needed by ALL burners that use electric heaters.

For decades HVAC industry has accepted the fact that electrically preheated burners require overhauling and frequent maintenance. Three years ago our HVAC business sold and installed one of Bechard's boilers and NOT ONCE have we pulled the burner off for overhauling and NOT ONCE have we serviced the burner due to carbonized oil created by electric heaters.

For decades, I have avoided the multi oil heating industry. With Bechard's invention, I market heavily and sell with confidence knowing our clients are not going to be let down. Since our first installation of Bechard's invention three years ago, I am writing this as a witness, that Bechard's invention does what he stated it will do in his patent application.

**17. From the foregoing, it is therefore my professional opinion that it is not "obvious" to combine the references as argued by the examiner to derive the claimed invention claimed by applicant.**

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title

18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Declarant:



Typed name

Address: DANIEL J. WIERSGALLA  
518 E. FILLMORE AVE.  
EAU CLAIRE, WI 54701

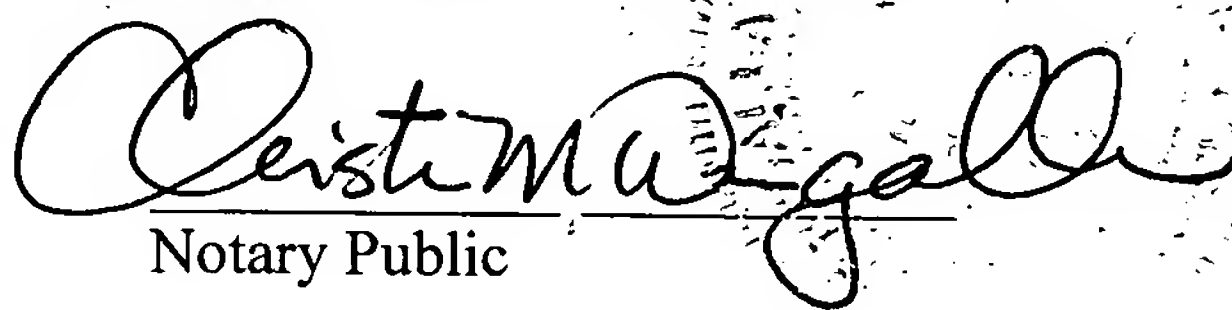
Date Oct 23<sup>rd</sup>, 2007

or

COUNTY OF Eau Claire )  
STATE OF Wisconsin )

On this 23 day of October, 2007 before me, a Notary Public for and within the County aforesaid, personally appeared Daniel Name, whom I know to be the person who signed the foregoing affidavit.

12-3-07

  
Notary Public

Enclosure

## SECTION 9: MAINTENANCE

### Understanding Maintenance

Maintaining your Clean Burn CTB is an important activity which includes several periodic maintenance activities and an annual burner tune-up...all are necessary to keep your boiler running in peak condition.



**WARNING:** Failure to maintain and/or improper servicing by unqualified personnel may adversely affect the proper, safe operation of your coil tube boiler, may reduce the service life of your boiler, and may void your warranty.

The following chart summarizes all the maintenance activities which should be performed on the CTB at the intervals indicated. Instructions/procedures for these activities are included in this chapter.

Maintenance Activity	Interval
Cleaning the canister filter	Before vacuum gauge reads 10" HG of vacuum
Servicing the metering pump	At least once a year
Cleaning the check valve/screen	At least once a year
Cleaning water/sludge out of oil tank	At least once a year
Cleaning out ash (CB-200-CTB)*	Approx. every 750 hrs. per burner hour meter
Cleaning out ash (CB-350-CTB)*	Approx. every 1000 hrs. per burner hour meter
Checking boiler water condition	Periodically by qualified water treatment company
Annual burner tune-up	At least once a year

\*It is very important to clean the ash from the CTB on schedule. Normal use of the boiler requires clean-out at least twice during the heating season. Heavy, around-the-clock usage requires more frequent clean-out (e.g. one month of continual running of the boiler is 720 hours).

**NOTE: IMPORTANT!** Record all maintenance activities in the Maintenance Record provided in the Appendixes.

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### Annual Preventative Maintenance and Burner Tune-up

The Clean Burn CTB requires annual preventative maintenance. The burner also requires an annual tune-up to keep it running in peak condition. The burner tune-up should be performed by a qualified Clean Burn service technician who has the necessary parts and expertise.

Contact your local Clean Burn dealer to schedule the annual maintenance for your boiler. Various levels of service are provided to fit your particular need. This work is usually performed during the warm-weather months to prepare the boiler for the next heating season.